

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-11. (canceled)

12. (currently amended) A system for manufacturing a fullerene derivative, comprising:

means for generating high electron temperature plasma, configured to maintain an electron energy at 15 to 50 eV to generate a positive monovalent ion M^+ from a gas containing an atom M acting as a moiety in the production of a fullerene derivative;

electron energy control means for receiving and controlling the energy of electrons in the high electron temperature plasma to produce a low electron temperature plasma comprised of M^+ and electrons with an electron energy in a range of 1 to 10 eV, the electron energy control means being located downstream of the high electron temperature plasma generating means with respect to a flow of the high electron temperature plasma;

fullerene introducing means for introducing a fullerene into the low electron temperature plasma ~~comprised of M^+ and electrons~~ to produce a fullerene ion; and

a deposition substrate whereon a fullerene derivative produced as a result of a reaction between the fullerene ion and M^+ is deposited.

13. (currently amended) A system for manufacturing a fullerene derivative, comprising:

means for generating high electron temperature plasma, configured to maintain an electron energy at 15 to 50 eV to generate a positive monovalent ion M^+ from a gas containing an atom M acting as a moiety in the production of a fullerene derivative;

electron energy control means for receiving and controlling the energy of electrons in the high electron temperature plasma to produce a low electron temperature plasma comprised of M^+ and electrons with an electron energy in a range of 1 to 10 eV, the electron energy control means being located downstream of the high electron temperature plasma generating means with respect to a flow of the high electron temperature plasma;

fullerene introducing means for introducing a fullerene; and

a deposition substrate,

wherein the low electron temperature plasma comprised of M^+ is driven against the deposition substrate while at the same time fullerene ejected via the fullerene introducing means

is allowed to impinge onto the deposition substrate so that M^+ and fullerene react with each other to produce a fullerene derivative which deposits on the deposition substrate.

14. (currently amended) The system as described in Claim 12 for manufacturing a fullerene derivative, wherein the high electron temperature plasma generating means comprises at least a pair of coils for generating a mirror field which prohibits ~~the~~ a dispersion of positive ions produced.

15. (currently amended) The system as described in Claim 13 for manufacturing a fullerene derivative, wherein the high electron temperature plasma generating means comprises at least a pair of coils for generating a mirror field which prohibits ~~the~~ a dispersion of positive ions produced.

16. (currently amended) The system as described in Claim 12 for manufacturing a fullerene derivative, wherein the high electron temperature plasma generating means comprises at least a pair of coils for generating a mirror field which prohibits the dispersion of positive ions produced, and a four phased helical antenna located between the pair of coils.

17. (currently amended) The system as described in Claim 13 for manufacturing a fullerene derivative, wherein the high electron temperature plasma generating means comprises at least a pair of coils for generating a mirror field which prohibits the dispersion of positive ions produced, and a four phased helical antenna located between the pair of coils.

18. (currently amended) The system as described in Claim 12 for manufacturing a fullerene derivative, wherein the high electron temperature plasma generating means comprises gas introducing means, a microwave generator for exciting gas to produce positive ions therefrom, a pair of coils for generating a mirror field which prohibits dispersion of the positive ions produced, and a four phased helical antenna located between the pair of coils.

19. (currently amended) The system as described in Claim 13 for manufacturing a fullerene derivative, wherein the high electron temperature plasma generating means comprises gas introducing means, a microwave generator for exciting gas to produce positive ions therefrom, a pair of coils for generating a mirror field which prohibits dispersion of the positive ions produced, and a four phased helical antenna located between the pair of coils.

20. (canceled)

21. (currently amended) The system as described in Claim ~~20~~ 12 for manufacturing a fullerene derivative, wherein the electron energy control means controls the energy of electrons by applying a control voltage to an electrode located upstream of the fullerene introducing means ~~in terms of the flow of plasma~~.

22. (canceled)